cycles

March 1956

FOUNDATION FOR THE STUDY OF CYCLES
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cycles

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The Director's Letter

Dear Member:

A New Book About Cycles

I suppose by now you realize that the series of conversations with my friend Robert Steele which began in the January report is going to run over a considerable period of time. Before he and I get through talking about cycles, and I have recorded what we say, we will have enough words to fill a small book.

Of course a book is more than a collection of words. Even so, these conversations may provide the raw material out of which another book on cycles could be written. To be sure, it would take a lot of editing, rewriting, and rearranging; even so it seems to me to offer possibilities.

You can be of real help in connection with these conversations, whether they result in a book or not, if you will write *your* questions on a scrap of paper and mail them in to me at East Brady, Pennsylvania. Dr. Steele can ask me your questions as well as his own and I, on my part, will try to provide the answers. If you will do this we can write the conversations together, as a joint enterprise, and they will be much better than anything I could do by myself.

Cycles and the Stock Market

I am writing this letter on the train from New York to Boston. I am going to Boston to meet with all of our New England members who want to meet with me to discuss cycles, general business, and, of course, the stock market.

Forecasting the stock market is, ideally, a full time occupation. At the very least, it is a full time avocation. For the person who is willing to give the subject the proper amount of time, a knowledge of cycles can be of real help. For myself I wouldn't be without it.

However, in the present state of our knowledge, I do not feel that a knowledge of cycles by itself is enough. I know a professional stock market forecaster who uses *nine* different methods to show him what's ahead. This is the sort of thing *you* should do if *you* want to be a forecaster.

The forecaster I am speaking of won't use a method until he has tested it carefully and painstakingly for at least *ten years*. He does *not* use a knowledge of cycles because he has been testing cycles for only about seven years. If you want to forecast the market you should be equally cautious.

I wrote to ask him how his cycle tests were coming out. I can't quote him exactly, for I do not have his answer with me as I write, but, as nearly as I can remember his words, he said that the results were phenomenal and amazing. I have no doubt that, if his present success continues, he will, in time, start to use a knowledge of cycles as a tenth method to help him forecast market behavior. I find his report most gratifying.

Cycles—The Science of Prediction

I once wrote a book, in collaboration with my friend Ed Dakin, called *Cycles—the Science of Prediction.*

Of course an author does not choose the title of his book. The publisher does that. However, at the time, I thought the title very good. I still think it was catchy. But it is an oversimplification of a complex subject. A more accurate title for a book about cycles would be: *Cycles—An Art and a Science of Aid in Prediction.* Beware of nostrums and of people who claim to have all the answers to everything!

The Correspondence Course

How can *you* get the advantage of this art and this science to aid you with *your* forecasting problems? Well, you can't get it without some hard work. But, if you are willing to expend the necessary effort, the correspondence course called "Cycle Analysis" will give it to you (as best I know it and am able to transmit it).

This course will show you how to find cycles; how to separate them, how to project them, singly or in combination. It should perhaps be called "Trends and Cycles" because it also tells you how to find and project trend.

As a part of the course you will discover and project cycles in certain stock market figures that I will give you. You will also make a cycle analysis of a series of figures *of your own choosing.* I don't care what these figures represent. They may represent daily, weekly, monthly or yearly prices of some particular stock such as Westinghouse Electric, General Motors, or Standard Oil of New Jersey. They may represent prices of corn, wheat, oats, rye, or soy beans. They may represent the sales of your company or one of its divisions or products. They may represent rainfall, or lake levels or run off. They may represent the incidence of disease or of industrial accidents.

While you analyze these figures and find and project the trend and the cycles I will hold your hand, as it were, point out your mistakes and help you over the rough spots. By the time you have finished the course, you should have a good practical working knowledge of the subject.

Don't Expect Too Much

But don't expect too much! Don't for example expect that once you have finished the course you can apply what you have learned by itself so as to make an immediate fortune by playing the stock market! I can't say often enough that cycle knowledge is *partial* knowledge. It is an *aid.* It helps. It *isn't* Alladin's lamp.

Why Can't I Do All the Work?

A natural question is, why can't I do all this work for you?

One reason is the diversity of your collective interests. One man is interested in the price of vanilla, another in the sales of wire. It is physically impossible for me to make all these cycle studies simultaneously; to make them one after another would take years and years. Moreover to make intelligent cycle studies I would need to have, in each case, a practical knowledge of the figures I was dealing with.

"Well then," you may ask, "Why don't you pick one subject of general interest such as the stock market and limit yourself to that?"

Because, basically, *it isn't my job.* My job is to find out about cycles—all kinds of cycles. How they work, what causes them, how to tell significant ones from random ones—all that sort of thing.

To learn one thing I may have to study corn prices; to learn another I may have to study war; to learn another I may have to study earthquakes. The subject is as big as the whole wide world. If I limit myself to one little corner of it I'll never get anywhere.

You see my choice is, shall I be a stock market expert or shall I try to learn something about cycles? I can't be both. You know the answer. I'm trying, with your support, to learn something about cycles—one of the great as yet blank spots on the map of science.

Gifts

Each year, as a matter of principle, my wife and I like to give away to others a certain proportion of what we spend upon ourselves. In my mind I set this proportion at about one-third. Of course in dollars this does not amount to much because we don't spend so very much.

Sometimes we find at the end of the year that we have exceeded our theoretical ratio--once in awhile rather importantly. On such occasions I can be heard complaining to my wife, "Do you realize," I grumble, "that we gave away such and so much last year"? But she refuses to get disturbed. She always smiles and says sweetly, "Isn't it nice we had it to give." What can you say to an answer like that?

Her attitude towards giving is similar to that of the teacher in one of the 101 Zen stories published in a book by that name. The story is as follows:

THE GIVER SHOULD BE THANKFUL

While Sei-Setsu was the master of Engaku in Kamakura, he required larger quarters, since those in which he was teaching were overcrowded. Umezu Sei-Bei, a merchant of Edo, decided to donate five hundred ryo toward the construction of a more commodious school. This money he brought to the teacher in gold.

Sei-Setsu said, "All right. I will take it."

Umezu gave Sei-Setsu the sack of gold, but he was dissatisfied with the attitude of the teacher. One might live a whole year on three ryo, and the merchant had not even been thanked for five hundred.

"In that sack is five hundred ryo," hinted Umezu.

"You told me that before," replied Sei-Setsu.

"Even if I am a wealthy merchant, five hundred ryo is a lot of money," said Umezu.

"Do you want me to thank you for it?" asked Sei-Setsu.

"You ought to," replied Umezu.

"Why should I?" inquired Sei-Setsu. "The giver should be thankful."

(The little book from which this story is taken, *101 Zen Stories,* is out of print; however it is about to be reprinted. If you wish a copy when it comes from the press, write Orientalia, Inc., 11 East 12th Street, New York, New York. They will let you know the price and get your approval before mailing.)

Gratitude

I'm afraid my attitude toward giving is a bit more like that of the merchant. When I give something I like a bit of gratitude in exchange. Also, when somebody gives me something, I am deeply appreciative—although probably not half as appreciative as I should be. However that may be, my heart does well up when I think of the generous support of so many of our members.

Do you realize that *over four hundred* of our members--nearly one in fourteen—gave a voluntary contribution to help the work along? These contributions ranged from $1 to $100, but of course the spirit behind the one is the same as the spirit behind the other. In fact, the men who gave $1 may have given more, in proportion to their means and the demands upon them, than a man who gave much more in dollars. To one and all, my deepest gratitude. May each of you who gave have the sense of satisfaction spoken of by the teacher in the Zen story quoted above!

Business in 1956

There are many measures of business. One of these is the Index of Industrial Production, as measured by the Federal Reserve Board. This index eliminates the effect of price. It records only the actual physical production of our mines and our factories.

My opinion is that this index will go down during 1956. More particularly, my guess is that the average for the first half will be about 142; for the second half, about 135. (For December 1955 and for January 1956 the index stood at 144.)

The Geisinger Indicator

One reason for my opinion that the Federal Reserve Board Index of Industrial Production will go down during 1956 is the behavior of the Modified Geisinger Indicator. As you know, this indicator has been generally downward since January of 1955.

The success of this indicator since I started to publish it in *Cycles* (August--September 1954) seems to have caused a good deal of interest. Our members want to know more about it.

The Indicator as now published is a

combination of an indicator devised by Mr. W. R. Geisinger and an indicator of my own. The Geisinger Indicator was published by itself until the November 1954 issue. In that issue I showed you the Geisinger Indicator by itself, my indicator by itself, and their combination. Since November 1954 I have published only the combined indicator.

I compute both indicators each month, combine them, and print them for you. I compute the Geisinger Indicator from figures which appear in the *Survey of Current Business*. To do it I use the formula worked out by Geisinger and revealed to me in confidence. My indicator is a rate of change indicator. It works on a curve like that of the Federal Reserve Board Index of Industrial Production when the change in the slope of the curve usually precedes the actual crest by a fixed number of months. Either indicator is pretty good by itself, but the combined indicator (as now published) is better than either one separately. I hope you continue to watch it and that it continues to throw some light upon the future.

Cordially yours,

Ned Dewey

Director

Research

A CYCLE ANALYSIS OF GENERAL MOTOR SALES

By Vedder Hughey

A MOST interesting article by Mr. Dewey appeared recently in the Bulletin. It explored the possibility that a dominant wave in the record of unit sales of General Motors passenger cars and trucks of about six years in length was interrupted by the war and has obviously resumed but is out of phase with the prewar cycle, upside down so to speak. If the cycle is an internal dynamic characteristic of the automobile business this is of course entirely possible. The existence of a clear cycle of six years in many heavy industry series lends good reason for this assumption.

On the other hand the extra long individual wave necessary to connect the prewar and immediate post war bottoms, if we assume only one wave would normally have occurred during this period, was preceded in the late twenties and early thirties by an equally long individual wave. And this suggests that the ordinary cycle analysis assumption that waves have unknown external causes and do not stop and occasionally resume out of phase should also be investigated in this interesting and important case. The assumption that such an average cycle has always been present requires, as we shall see, the not too difficult acceptance of a true average length for the cycle of 6.5 instead of 6.0 years in length.

This is the actual length we get from an ordinary periodigram of the sales data, and the fit of such a wave length to the raw data is very good. Naturally any analyst would be very unhappy to find 6.0 year waves in other similar series and few if any 6.5 year waves. Something like a decision between conflicting speculation and conviction, either of which could be wrong, is called for. Just for the record we thought we would do an analysis the conventional "old fashioned" way. Unfortunately, a decade or so will have to pass before either approach is in sufficient conflict with the other to warrant favoring either one on the basis of forecasting performance.

In the course of the work a number of other cycles appeared clearly present and so, before we closed shop, we had isolated five cycles and decided that their synthesis and projection would make an interesting analysis and tentative forecast, which was projected for the next fifteen years. The results appear in figure one and details of determination are described below.

In the three curves "A" the solid line is the annual unit sales, in thousands, of G.M. cars and trucks. The dashed line is the long term trend. This was derived by fitting a "logistic curve" to three equally spaced nine year averages centering at the years 1924, 1937, and 1950. The particular formula used was:

$$\text{logarithm of Sales} \quad A + \frac{B}{C + T}$$

where T is the independent time variable; with three typical Sales values such as our nine year averages, and the three corresponding time values, the constants A, B,

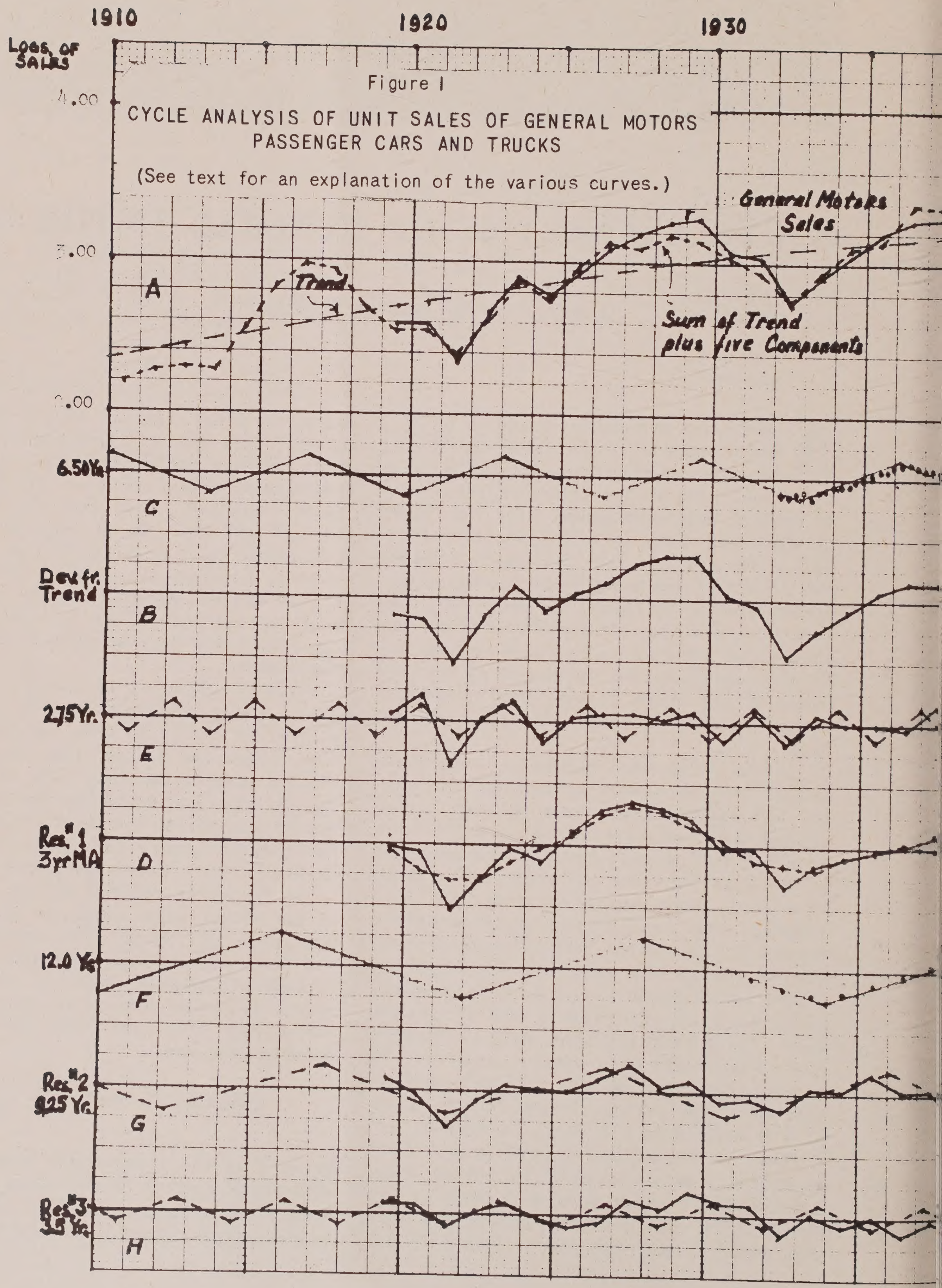
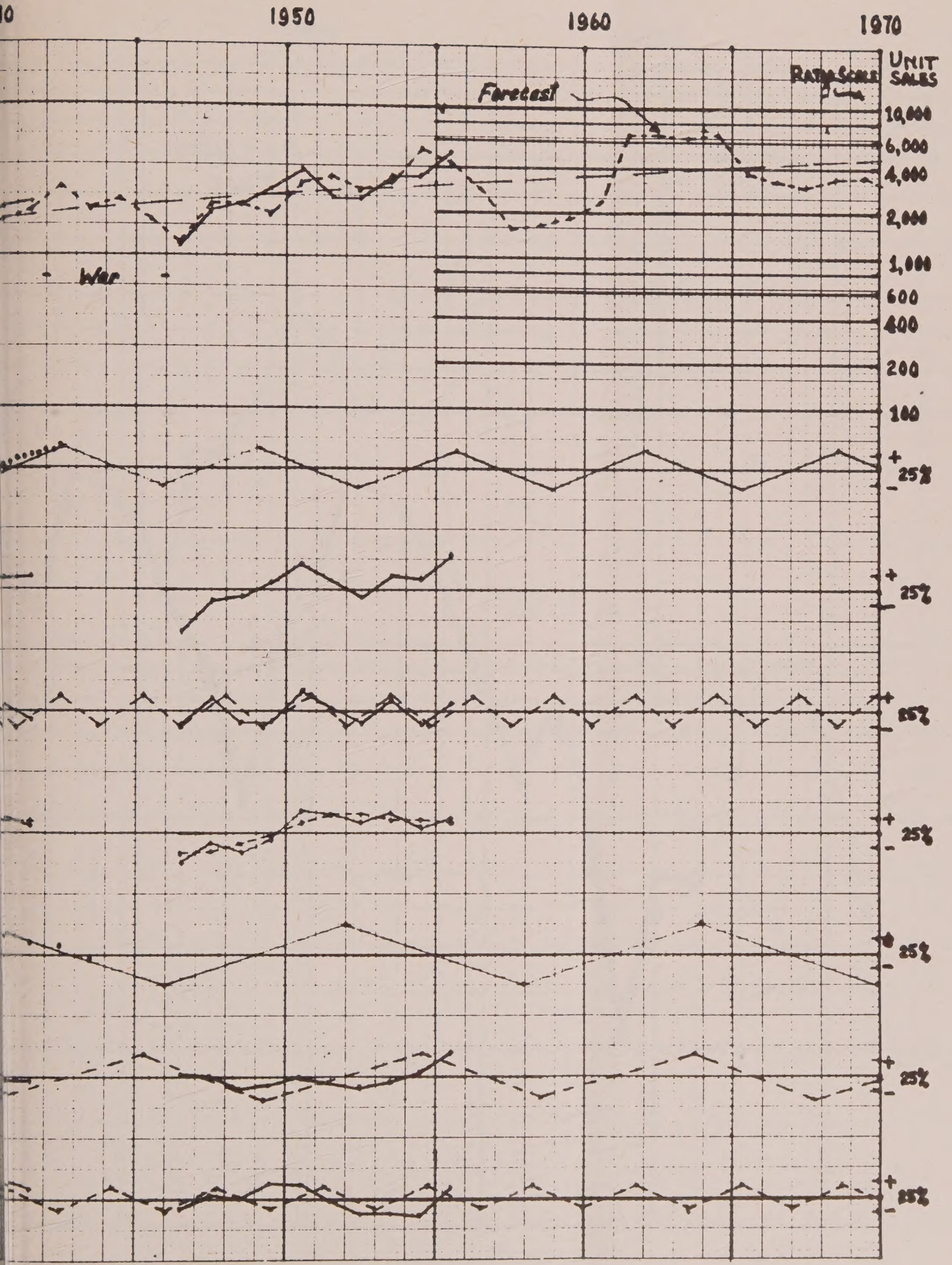


Figure I

CYCLE ANALYSIS OF UNIT SALES OF GENERAL MOTORS PASSENGER CARS AND TRUCKS

(See text for an explanation of the various curves.)


1950
1960
1970
UNIT SALES
RATIO SCALE
Forecast
War
10,000
6,000
4,000
2,000
1,000
600
400
200
100
+
25%
–
+
25%
–
+
25%
–
+
25%
–
+
25%
–
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25%
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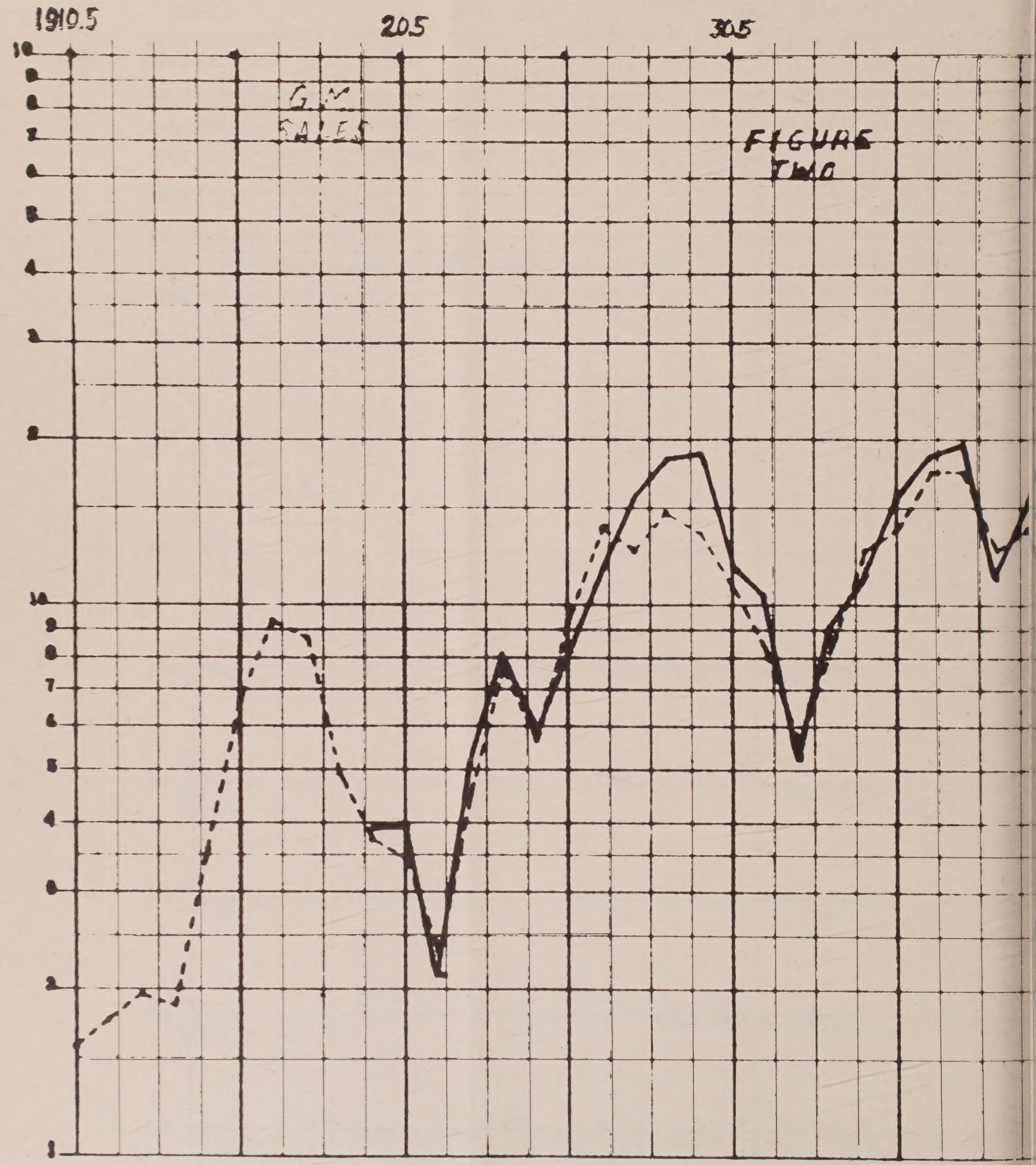
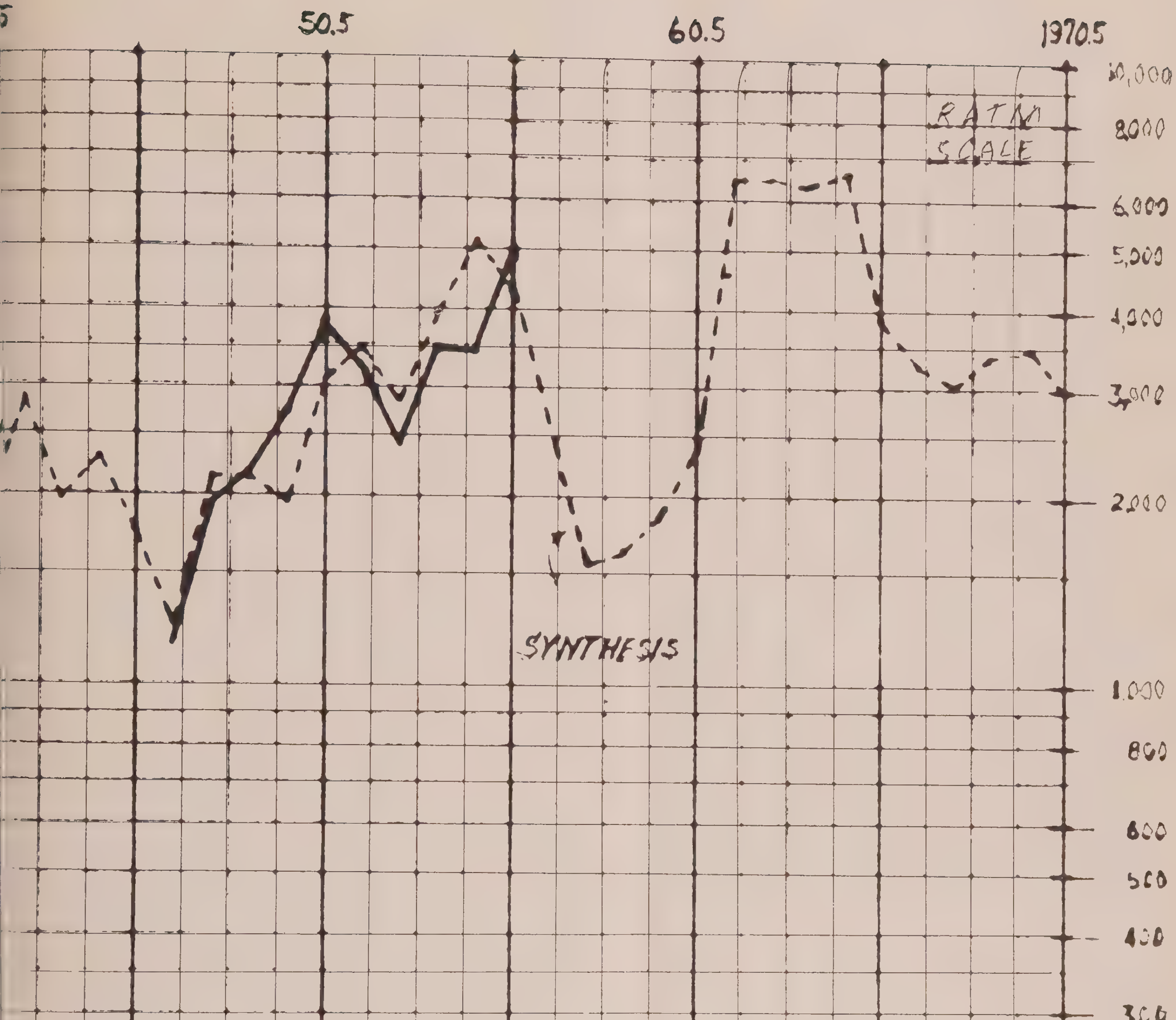


Figure 2

UNIT SALES OF GENERAL MOTORS PASSENGER CARS AND TRUCKS (solid line), TOGETHER WITH SYNTHESIS OF TREND AND FIVE CYCLES (broken line).

The synthesis has been projected to the middle of 1970 (1970.5) to show approximately what unit sales will be if these cycles continue.


50.5
60.5
1970.5
RATIO SCALE
SYNTHESIS
10,000
8000
6,000
5,000
4,000
3,000
2,000
1,000
800
600
500
400
300
200
100

and C can be determined by solving the three equations resulting.

The Cycles and Trend Combined

The construction and use of curves of this type are described in "Applied General Statistics" by Croxton and Cowden in Chapter XVI and on page 635. They are not at all difficult to derive and have universal acceptance as growth trend indicators. The dotted line among curves "A" is the sum or synthesis of the actual components, shown below in figure one, added to the long term trend values. The scale at right shows the actual unit sales and at left the logarithms of these figures, with which the actual work is done. The "ratio scale" at the right, compressed logarithmically as values increase, is universally used since equal percentage moves are shown in equal size whether at the top or bottom of the scale. This is the most logical presentation of most statistical data.

Curves "B" and "C"

At "B", figure one, is shown the deviation of the actual G.M. unit sales from their long term trend. At "C", the dotted line represents the values of a four line periodigram. The cycle has been corrected to show what the amplitude would be if monthly instead of annual data were available. This has been done in each case to show the true cycle on the graph but in the synthesis these values have been reduced again to their actual annual averages which are, especially for the shorter waves, much smaller.

A Different Method of Figuring Strength

In determining this apparent 6.5-year cycle, and also the others, another somewhat debatable principle was employed. The actual maximum and minimum values of the several cycles made manifest by the periodigram have been averaged to determine the cycle amplitude instead of the values for years of theoretical crest and trough. There is some theoretical justification for this as well as the practical one that it seems to give a truer picture of waves of fractional length when only very crude data are available. At any rate, the synthesis fits the raw data quite well, and this, though not a sufficient criteria, is certainly the most necessary one. The solid line at "C" represents the idealized 6.5 year cycle projected backward to 1910 and ahead to 1970

Curves "D", "E", and "F"

At "D", figure one, we have removed the annual average of the theoretical 6.5 year wave from the deviation curve of the raw data from trend, solid line. The dotted line is a three-year moving average of this. At "F", figure one, the dotted line shows a 12.0 year periodigram of the three year moving average. The 12.0-year wave shown idealized as the solid line seems clearly and convincingly present. It is also present in industrial stock prices. At "E" the deviations of curve "D" from its three-year moving average is shown, corrected to show amplitudes as if data were monthly instead of annual etc., as explained above. The dotted line at "E" showing the idealized 2.75-year wave present is perhaps the most convincing of all the cycles revealed. It is not surprising since this wave occurs in industrial stock prices, railroad freight ton-miles and is dominant in construction activity indexes, all basic to the economy.

Curve "G"

After removing trend and the apparent 6.5, 12.0, and 2.75 year waves from the raw sales data we are left with residue #2, shown as a solid line at "G" in figure one. As revealed by periodigram and displayed idealized by the dotted line, there appears to be a 9.25 year cycle which fits the data fairly well; good enough, we think, to warrant using in our synthesis and tentative forecast of G.M. sales. Of course the series is not long enough to reveal any but the shorter cycles as substantially significant but parallel confirmation, such as the existence of these waves in industrial stock series, would seem to make such an analysis and forecast as this worth a good try and some serious consideration.

Curve "H"

In the final residue, shown as a solid line at "H" in figure one, there appears a 3.5 year wave. As in most series, this wave is convincing a few decades ago but very dubious in recent years. The writer thinks it is nonetheless still present though masked and will in due course reassert itself in phase with the old cycle. Therefore we have included it in our analysis, in spite of its doubtful value.

The Projection

The projection of the trend plus our five cycles ahead to 1970 poses some curious if not startling possibilities in the not too distant future. The indicated slide in sales to a drastic low in 1957-59 is hard to conceive of in view of current business and the rosy anticipations indulged in on all sides. The prosperity plateau indicated for 1961-64 is unique in the entire synthesis and would certainly indicate an incredibly long sustained period of productivity and profit. The dull run of the mill period following this would be a most natural consequence of near saturation of the car market effected during the prosperity plateau of four terrific years.

Results Shown in Figure 2

The limitations of space have compressed the vertical scale in curves "A" of figure one. For greater readability and appreciation of the immense moves which have occurred in this key index of the American economy we have redrawn "A" at half the horizontal time scale and twice the vertical scale. This is displayed as figure two.

SUPPLEMENT

DATE	SALES	SYNTH.	DATE	SALES	SYNTH.	DATE	SALES	SYNTH.
1910		159	1930	1158	1072	1950	3812	3090
11		178	31	1034	813	51	3016	3468
12		195	32	526	562	52	2434	2821
13		186	33	802	851	53	3496	3981
14		355	34	1126	1259	54	3450	5131
15		676	35	1564	1380	55	5000	4267
16		934	36	1867	1730	56		2821
17		871	37	1929	1722	57		1551
18		490	38	1108	1259	58		1622
19	392	372	39	1543	1318	59		1820
1920	393	347	1940	2025	1698	1960		2344
21	215	234	41	2257	1950	61		6462
22	457	447	42		2821	62		6462
23	799	777	43		1995	63		6310
24	587	563	44		2291	64		6612
25	836	934	45		1738	65		3802
26	1235	1381	46	1175	1231	66		3242
27	1563	1231	47	1931	2139	67		3020
28	1811	1479	48	2146	2139	68		3391
29	1899	1349	49	2764	1950	69		3468

TREND EQUATION CONSTANTS:-

AVERAGES CENTRAL DATE	9 YEAR AVERAGES OF SALES
(19)24.5	1.86(LOG)
" 37.5	2.18 "
" 50.5	2.41 "

SOLVING EQUATIONS:

A equals 3.77
B " -123.18
C " 40.0

OTHER TREND VALUES

1911.5 1.42 (LOG)
1963.5 2.58 "

COMPONENTS ISOLATED	LATE TOP	LATE BOTTOM	AMPLITUDE: % OF TREND MONTHLY FIG.		ANNUAL
2.75 YR.	'53.50	'54.75	23%	plus and minus	14%
3.50 "	'54.75	'53.00	17.5%	"	11.5%
6.50 "	55.625	52.375	29%	"	24%
9.25 "	'54.50	'49.25	35%	"	31.5%
12.0 "	'52.00	'46.00	47.5%	"	43%

THE 1956 POSTSCRIPT

TO

CYCLES THE SCIENCE OF PREDICTION.

PART IV THE 9.2-YEAR CYCLE

"I've been thinking off and on all week about those cycles you were showing me last Sunday," said my friend Robert Steele as we lit our pipes in front of the fire on our usual Sunday afternoon visit. "You said Professor Huntington of Yale thought that the 9.6-year cycle in animal life might be the result of a 9.6-year cycle in the abundance of ozone in the atmosphere."

"Yes," I said.

"Well, admitting for the sake of argument that ozone is the colored gentleman in the woodpile—though for the life of me I can't see how it could be—can you explain how the ozone could at one and the same time cause a 9.6-year cycle *and* a 9.2-year cycle? You did say there is also a 9.2-year cycle, didn't you?"

A 9.2-Year Cycle and a 9.6-Year Cycle

"Yes," I answered "there is a 9.2-year cycle, or something very close to it. And you are right that a 9.6-year ozone cycle couldn't reasonably be the cause of it. If these two cycles were together at any given moment they would be four-tenths of a year apart one cycle later (9.6 less 9.2 equals .4), eight-tenths of a year apart two cycles later, one and two-tenths of a year apart three cycles later, etc. In a dozen cycles they would be upside down in relation to each other. The difference of four-tenths of a year in wave length isn't much, but the difference is *cumulative*.

"What's the thing that shows this 9.2-year cycle over the longest period of time?" asked Robert.

"As far as we have had time to investigate, pig iron and copper prices," I answered. "Figures for both pig iron and copper are available back to 1784."

"Where on earth do you get prices as far back as that?" asked Robert.

Prices for 46 Commodities

"They used to be very hard to get." I said, "But a number of years ago a study was made which dug up all available prices from 1700 to 1862 for some forty-six commodities in each of some six different cities. The committee that did the work wrote a small expensive book that isn't much use to the cycle student, and, at the same time, they published a large cheap book ($4.00) that is invaluable. Here is a copy. As you can see, it is called *Wholesale Commodity Prices in the United States 1700—1861, Statistical Supplement, Actual Wholesale Prices of Various Commodities*, by A. H. Cole. Cole was librarian at the Harvard Business School."

"What are the cities for which there are figures?"

"Boston, New York, Philadelphia, Cincinnati, Chicago, and New Orleans."

"What are the commodities for which there are figures?"

"I don't remember them all, but here is the list." I answered. "You can read it for yourself."

see next page

Commodity	Year of Earliest Data
Ashes	1763
Bacon	1784
Beef	1720
Bread	1720
Butter	1760
Candles	1756
Coal	1784
Coffee	1749
Copper	1784
Corn	1720
Cornmeal	1784
Cotton	1731
Cotton yarn	1819
Duck	1753
Fish	1750
Flour	1700
Gin	1784
Hides	1840
Hops	1790
Indigo	1731
Iron, bar	1738
Iron, pig	1784
Lard	1767
Leather	1749
Linseed oil	1784
Lumber, bds.	1749
Molasses	1700
Nails	1784
Pork	1720
Rice	1720
Rum	1700
Salt	1700
Saltpetre	1784
Sheetings	1784
Staves	1720
Steel	1784
Sugar	1700
Tallow	1762
Tea	1720
Tobacco	1720
Turpentine	1720
Whale oil	1784
Wheat	1700
Whisky	1797
Wine	1720
Wool	1812

"Where do you get the figures 1862 to date?"

"Oh that's easy," I answered.

"If you are content with annual figures you can get a good many of them from the *Statistical Abstract of the United States*, published each year by the Commerce Department. ($3.50)

"For monthly figures you may have to go to the Department of Agriculture or to the Bureau of Labor Statistics.

"For the past ten years or so you can use the *Commodity Yearbook* ($12.00), published at 82 Beaver Street, New York, New York.

"Then there are always the associations of the people who buy and sell the commodity involved. A list of these can be got from *National Associations of the United States* published by the Department of Commerce. ($3.50)

"One way or another you can pick up the information without too much trouble."

Ashes, Salt, and Tallow

"It certainly is interesting to see the things that were important in the old days," said Robert, "Ashes and salt and tallow! It gives you a picture of a primitive economy, doesn't it? Where do you suppose they got all the figures?"

"I imagine it was from old newspapers."

"Yes," said Robert, "I suppose so."

"Look!" Robert continued, "all these old prices are in pounds and shillings! I'd forgotten about that."

"Yes," I said, "and each city has its own conversion rates. Of course for cycle study all these pound and shilling prices have to be converted to dollars."

Twenty-four Hundred Figures

"I notice that all these figures are monthly averages. Aren't these terrible to work with? Let's see—two hundred years and twelve figures to a year make twenty-four hundred figures. It's staggering!"

'Well," I answered, "you can cut the work down some by computing quarterly or semi-annual or annual averages."

"Isn't that a lot of work too?"

"Yes, but it saves itself from ten to a hundred times in the end, depending on how extensive your cycle study turns out to be."

"What determines which average you use?"

"You use the longest one you can get

away with, because the longer the average the fewer the figures. If annual figures will do you have only 200 figures to manipulate, semi-annual will give you 400 figures, quarterly 800 figures, and of course—as you said—if you have to go to monthly figures you have to handle 2400."

Monthly Figures Needed for Accuracy

"Why won't annual figures always do?"

"The precision with which you can measure the length and strength and shape of the cycle depends upon the frequency of your data. For short cycles you have to use monthly data, but for longer cycles—say cycles nine or ten years long—you can use quarterly data. For eighteen or twenty-year cycles semi-annual data would do. And for 35 or 40 year cycles annual data would be all right. Of course for reconnaisance you can use cruder data than for final work. Even so it's quite a lot of work."

"Have you studied all these figures for cycles?" asked Robert.

"Good heavens no!" I said. "I've just messed around a little with copper, pig iron, cotton, wool, and corn. I've never even *looked* at the others. It takes work, man!"

"Would you like to study the others?" asked Robert.

"Of course!" I answered.

"How would you go at it?" asked Robert.

Take One Cycle to Start With

"Well, to start with I think I'd take one cycle like that 9.2-year cycle I was speaking of and try to isolate it in each of the 46 series of figures.

"What do you mean isolate?" said Robert. "Of course I know what the *word* means but I don't know what *you* mean."

"I mean I'd try to separate it out from the other cycles and randoms so that it could be studied—so that we could see just when it came, just how long it was, just how strong it was."

"What good would that do?" asked Robert. "If it's in one price wouldn't it be in all? Isn't it unduly ponderous to do the job over 46 times?"

Don't Take Things for Granted

"Well maybe it's in all prices, but maybe it isn't. I don't believe in taking things for granted. The 17 3/4-year cycle is clear as a bell in cotton prices and pig iron prices, but I could never find a smidgen of it in copper prices. Different prices have different cycles."

"Wouldn't that mean that the cycles would get out of step after a while and that the time would come when some prices would be at a crest at the same time that other prices were at a trough?"

"Yes."

"It's hard to believe."

"Yes," I said, "Lots of things are. But it's true."

"You'd use the same techniques on each string of figures—or series as you call them?"

"Yes."

"And you'd find the cycle in some series and not in others?"

"Probably."

Cycle Not Created by Technique

"Well that would prove one thing anyway," said Robert. "It would prove that the techniques didn't create the cycle because if the cycle were created by the techniques of isolation you'd find the cycle every time."

"Yes," I said, "But does that need proving?"

"Perhaps not for a statistician," answered Robert, "but for a layman like me it does. When you start juggling figures around I get lost. And I think lots of other people do too. But even without knowing anything about your processes I can see that unless they give you the same cycle every time that the cycle cannot be the result of the technique."

"Yes."

"But," said Robert, "what would that show you? Suppose you find the 9.2-year cycle in 30 out of your 46 prices. So what?"

"Well, for one thing you'd know that the 9.2-year cycle was not a price phenomenon, as such.

"Second," I continued, "we'd discover if, in those commodities that behaved this way, the *timing* of this cycle was more or less the same. If so it would support the idea that it was one and the same cycle.

"Third, we'd see the turning date of the commodity which turned earliest. This might give us a clue to *cause*. It would be unreasonable to assume that the cause came *after* the earliest effect.

"For example, if the crests of the 9.2-year cycle scattered in various commodities from early 1954 to late 1956, and if we found a similar cycle in sunspots with a crest which came in 1955, we'd know for sure that the 9.2-year cycle in sunspots could not possibly be the cause of the 9.2-year cycle in prices."

"*Is* there a 9.2-year cycle in sunspots?" asked Robert.

"I don't know," I answered. "I never had time to investigate."

"But your example is purely negative." Robert said. "It's no clue to *cause* if you prove that sunspots *aren't* the cause."

"Yes it is," I said, "if you'll permit me to contradict you. If you can eliminate enough things that aren't so, maybe in time you'll find the thing that is so. However when you do find it, it will have to be coincident with or come before the earliest effect. That's right, isn't it?"

"Yes," said Robert.

"But to go on with my answer to what good it is to know all this:

"Fourth, studying all these long series of figures would enable us to get the best possible approximation of cycle length.

"A fifth reason would be the hope that there would be some systematic variation of timing or wave length according to city—that is, according to latitude and/or longitude.

Practical Help to Our Members

"And finally, most important of all, there is the practical matter of helping our members to know the basic structure of the prices of the things they buy and sell."

"I'm beginning to get the picture," said Robert.

"If it's so important—and I'm beginning to see that it is—why don't you do it?"

"Lack of time and money." I answered.

"Wouldn't IBM machines help?"

"Yes, they would, but it would still take a lot of my time and a certain amount of money? 'So much to do and so little time to do it!' as Cecil Rhodes used to say. However I'm not so old—and maybe I'll get to it sometime. It would certainly be a boon to our members.

The Charts

"You've spoken of this 9.2-year cycle in pig iron and in copper. Do you have charts so that I can see it?"

"Yes indeed," I answered. "Here is a chart showing the cycle in pig iron prices see bottom curve on next four pages and also one showing the cycle in copper prices see top curve on next four pages .

"In both instances the prices are shown as percentages above and below a long term trend. This technique takes out the big swings and makes the 9-year cycle easier to see. Also, in both instances, the curves have been smoothed to eliminate the short term fluctuations. This smoothing also helps you to see the 9-year cycle.

"If you want to see charts of the actual figures before removal of trend and before smoothing, I can easily get them for you. For pig iron the curve was printed in Vol. 2 No. 4 of the *Journal of Cycle Research;* for copper in Vol. 3 No. 4. The cycle is right there in the original figures, but of course it isn't so plain."

"Oh, don't bother" said Robert, "I'll see it some other time."

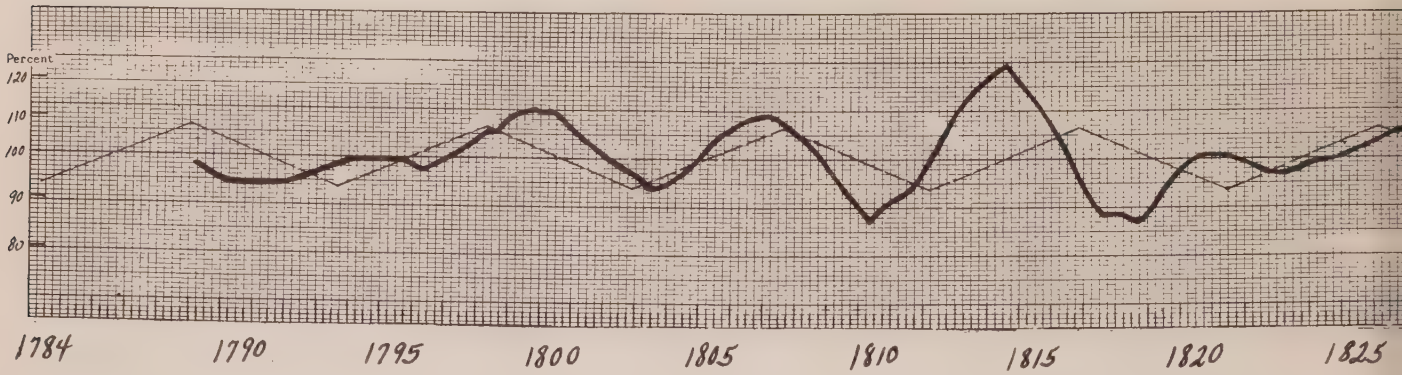
Cycle Lengths Slightly Different

"The cycle in pig iron looks to be 9.2 years long. In copper it measures about 9.3 years long," I said.

"Why the difference in length?" asked Robert.

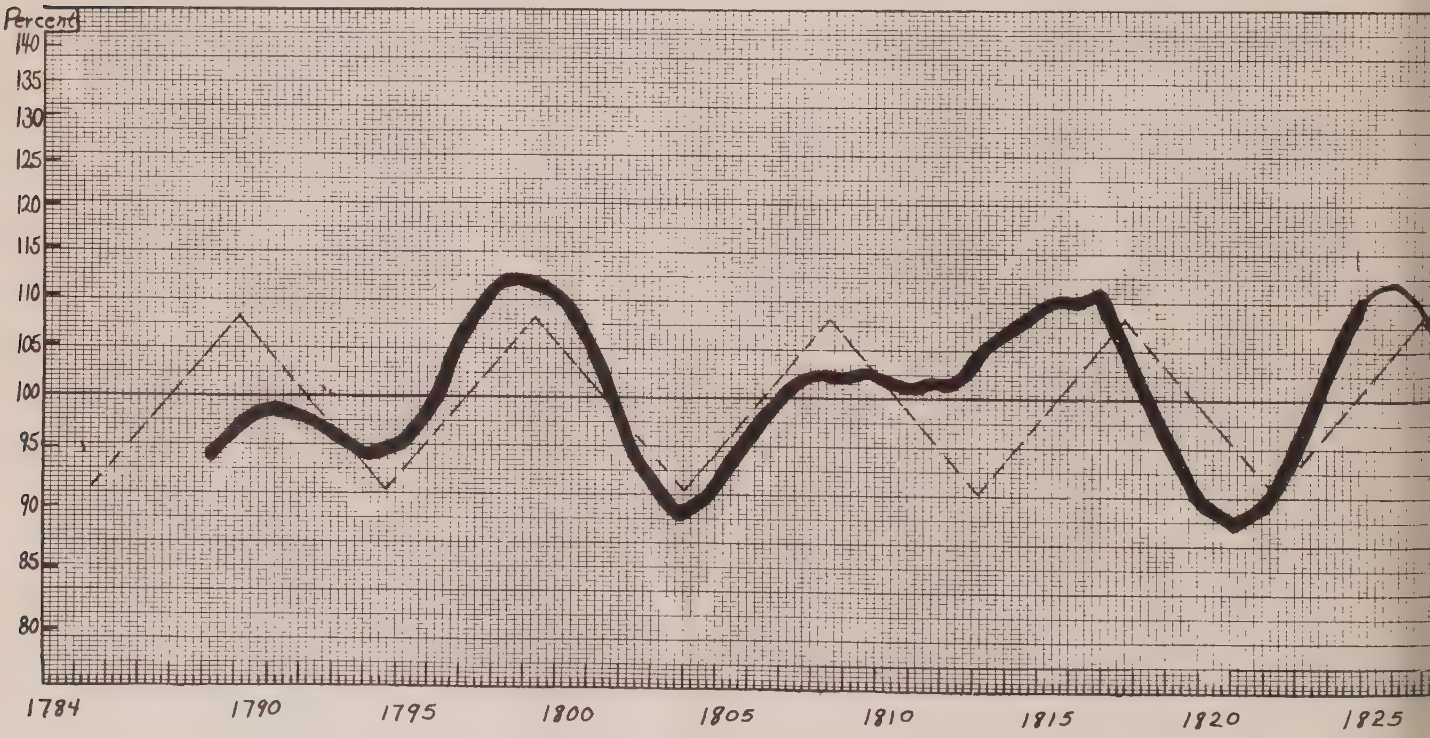
"I wish I knew. We find cycles that seem to be exactly 9 years long. Others that seem to be 9 2/10 years long. Others that seem to be 9 1/3 years long. The lengths vary a bit from time to time, too. That is, for a hundred years it may look like one length, but if you include another fifty years of figures it will average out to another length.

"The simplest explanation is that there is only one basic length and that randoms fall in such a way as to make the cycle in any particular series look a little longer or a little shorter as the case may be. However, I don't think this is the correct explanation. I think that there are probably at least three cyclic forces of about the lengths I have named which are present in each different series of figures in



THE 9.3-YEAR CYCLE IN COPPER PRICES, 1784—1955.

The solid line shows the percentages by which smoothed copper prices have been above or below their long term trend.
The broken line diagrams a perfectly regular 9.3-year cycle. Ratio Scale.



THE 9.2-YEAR CYCLE IN PIG IRON PRICES, 1784—1955.

The solid line shows the percentages by which smoothed pig iron prices have been above or below their long term trend.
The broken line diagrams a perfectly regular 9.2-year cycle. Ratio Scale.
Heavy line from the beginning to 1825 shows how cycle appeared in after-discovered figures.

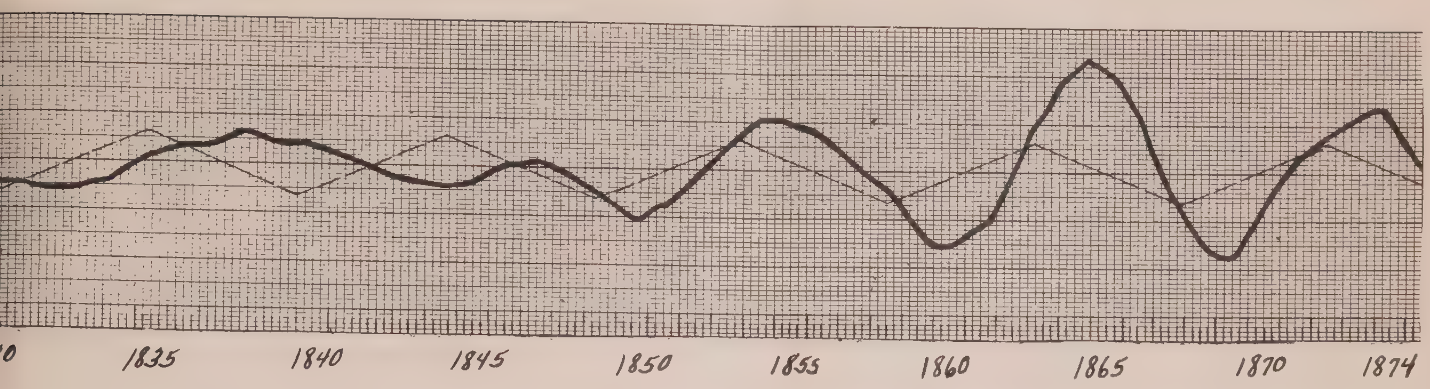
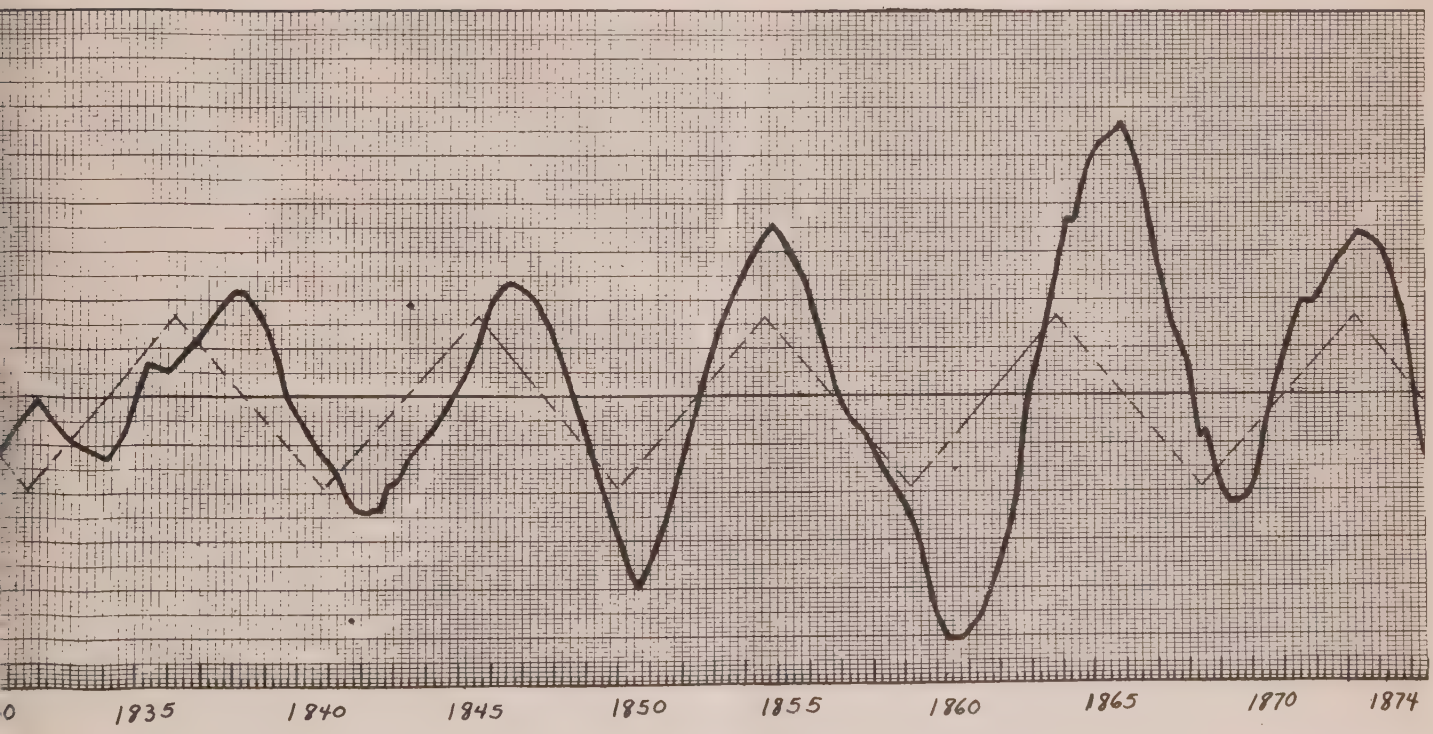


Chart continued on next two pages.



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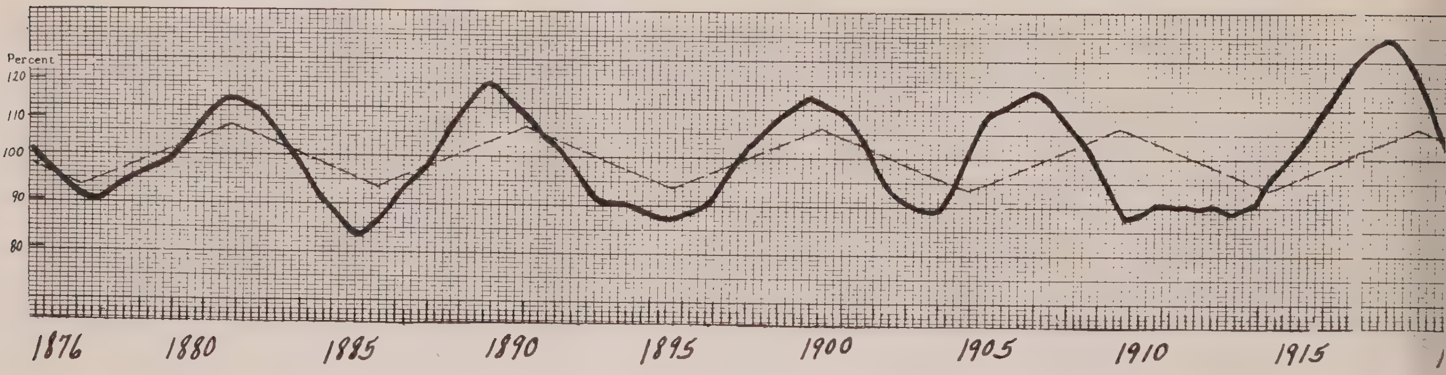

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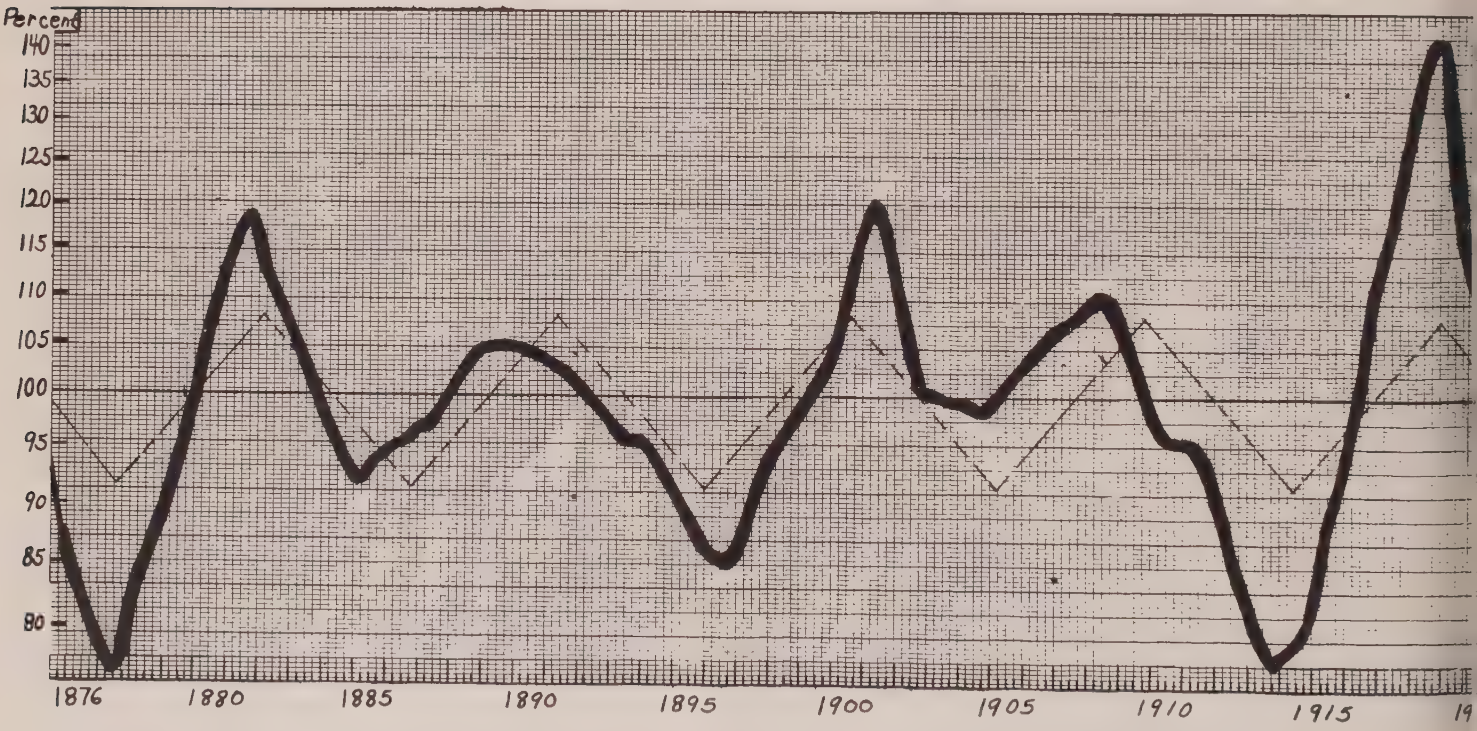

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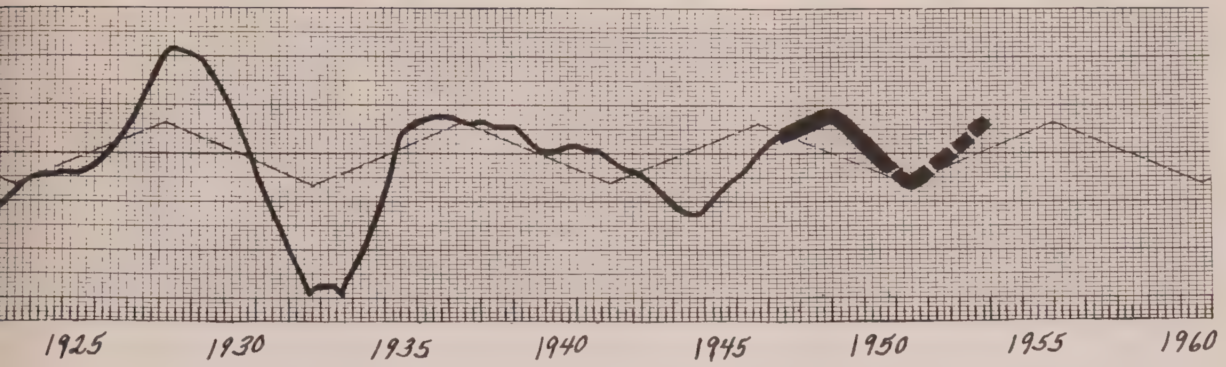
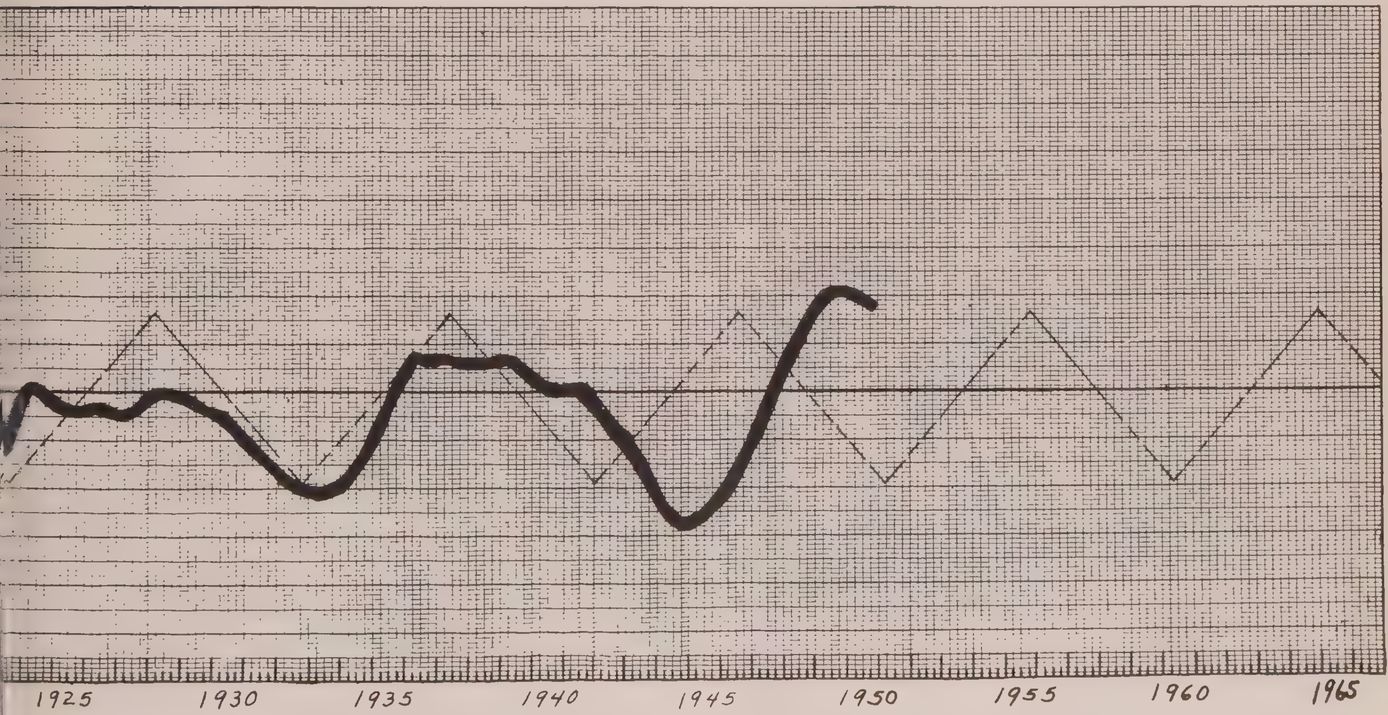


THE 9.3-YEAR CYCLE IN COPPER PRICES, 1784--1955.

The solid line shows the percentages by which smoothed copper prices have been above or below their long term trend.
The broken line diagrams a perfectly regular 9.3-year cycle. Ratio Scale.
The Heavy line from 1946 shows how cycle has unfolded since discovery.



THE 9.2-YEAR CYCLE IN PIG IRON PRICES, 1784—1955.

The solid line shows the percentages by which smoothed pig iron prices have been above or below their long term trend.
The broken line diagrams a perfectly regular 9.2-year cycle. Ratio Scale.
The Heavy line from 1875 shows cycle has unfolded since discovery.

different proportions."

"Why is the pig iron price curve extra thick up to 1825 and from 1875 to date?" asked Robert.

Cycle in Pig Iron Prices Discovered in 1875

"Because the 9-year cycle in these figures was first discovered in 1875 in a series of figures which began in 1825. Samuel Benner, who discovered the cycle, had no way of knowing what prices were going to be after 1875 or what they were before 1825. I made the lines before 1825 and after 1875 extra thick so that you could see how the cycle came out both ways *after discovery*. It's really just as convincing for a cycle to come true going backwards as going forward. A 9-year beat is clearly evident.

"On the other hand, Benner's series of figures wasn't long enough to enable him to pin the length down to a fraction of a year. So, comparing the actual behavior with the 9.2-year zigzag isn't quite accurate. But the basic fact is true, namely, that, using figures 1825 to 1875, Benner discovered a cycle about 9 years long; that this cycle was present in after-discovered figures 1784-1825 and in after-unfolded figures 1875—1955. The fact that with 172 years of figures instead of 51 years of figures the length proved to be 9 2/10 years long instead of 9 years long is completely beside the point."

"This cycle was first discovered in 1875 you say ?" said Robert.

"No," I answered. "A 9-year *cycle* was discovered by Clement Juglar, a Frenchman, in 1860. His book is called *Des Crises Commercial et Leur Retour Périodique en France, en Angleterre, et aux États-Unis*. But Benner, as far as I know, was the first to observe this cycle in *pig iron prices*. Benner's book was copyrighted in 1875. There is no reason to think that Benner, in Ohio, ever saw Juglar's book, published fifteen years before, in France, but of course we don't know for sure."

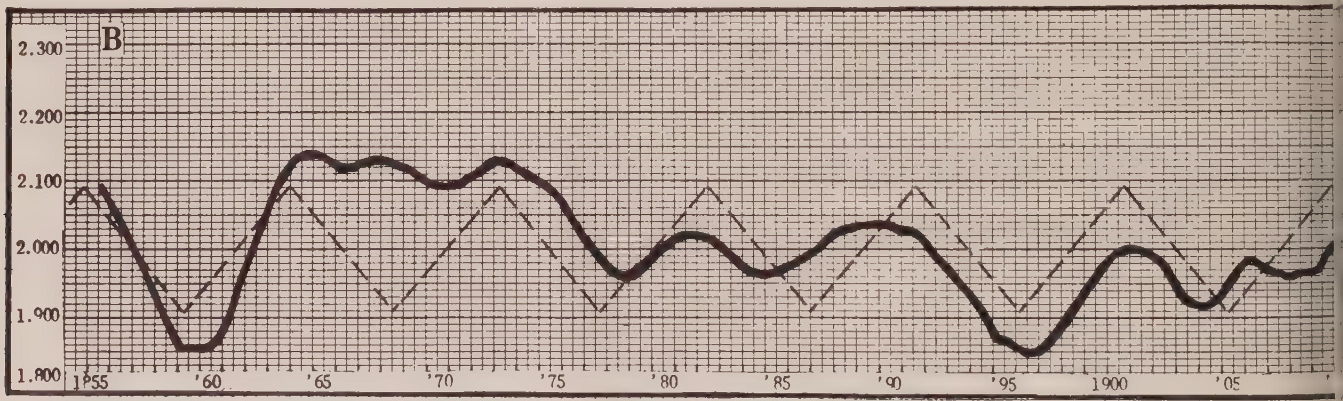
"In a way though," said Robert, "you could say that the 9-year cycle has been coming true since discovery in 1860, couldn't you?"

"Yes."

"The 9.3-year cycle in copper prices doesn't seem as regular as the 9.2-year cycle in pig iron prices," said Robert.

Cycle in Copper Prices Stronger

"It isn't," I said, "but its a little stronger."



THE 9.2-YEAR CYCLE IN CO

The solid line shows the percentages by which common stock prices, smoot
The broken line diagrams a perfectly regular 9.2-year cycle. Heavy line

"It doesn't look it."

"That's because the up and down scale on the copper price chart is more condensed. The two are not companion charts. Actually, at crest, the average strength of the 9.2-year pig iron cycle is about 112% above trend; of the 9.3-year copper cycle 14% above trend. And of course about as much below at time of trough."

"Where are we now in the cycle," asked Robert.

"Just about at the peak, as far as timing of the ideal cycle is concerned. As closely as I have been able to measure it so far the 9.2-year cycle in pig iron prices was due to crest ideally in October 1955; the 9.3-year cycle in copper prices was due to crest January 1956. For the next four and a half years this cycle is due to be going down."

"What do you mean *ideal cycle*?" asked Robert.

The Ideal Cycle"

"This is the average or theoretical cycle, in contrast to the actual cycle which is likely to come a bit early or a bit late. It's just like the cycle of the year. We know that the annual temperature cycle is ideally 12 months long, but the actual elapsed time from the coldest day of one year to the coldest day of the next can be anywhere from 10 to 14 months long. When I say that ideally we are at the crest of this cycle it's like saying, on February 1st of some particular year that, *ideally* we are at the coldest day."

"I should think that information of this sort would be of enormous value to businessmen and to people who buy and sell copper and pig iron, and other things that behave this way," said Robert.

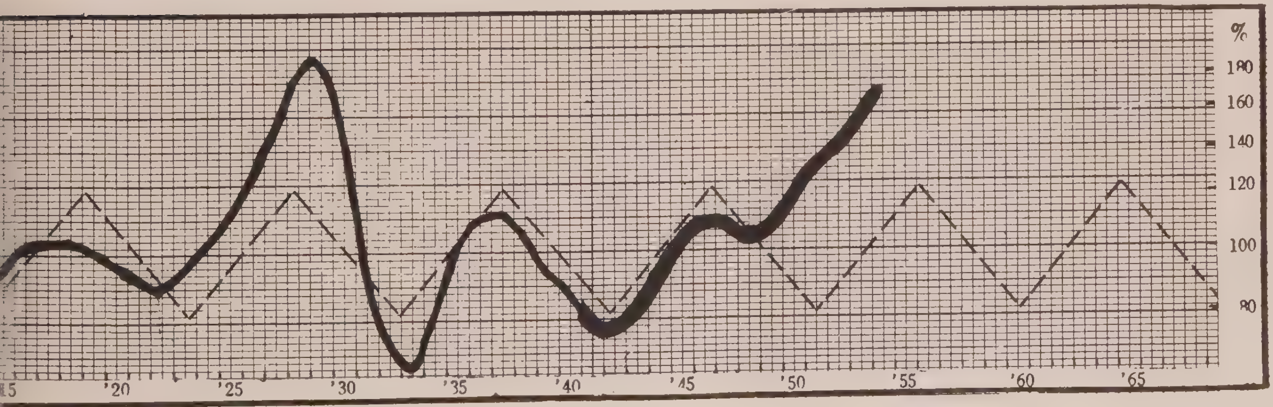
"Gracious no," I said. "They don't know anything about it!"

Cycle Not Known by Businessmen

"Do you mean to tell me," said Robert, "that intelligent businessmen—managers of companies, purchasing agents, and the like—don't know about a cycle which has been present in price figures since the beginning of the figures *and which has come true for almost a hundred years since discovery*?"

"I mean to tell you just that," I replied. "Moreover, when you point it out to them—if you can get past their damn secretaries—they think you're crazy. New ideas have tough sledding."

"Well!" said Robert, "businessmen



TOCK PRICES 1855—1955

a 13-quarter moving average, have been above or below a straight line trend.
1940 shows how this cycle has come out since discovery. Ratio Scale.

aren't as intelligent as I thought they were!"

"I just can't get over it," continued Robert. Wouldn't this sort of knowledge increase their profits?"

"Yes."

"How much?"

"Well on the average, trough to crest, about 25% gain for pig iron, 30% gain for copper,"

"What was it this last cycle?"

Copper Prices up 80%, Stock Prices up 100% in Rising Half of Present Cycle

"For pig iron it was about 9%, for copper it was about 80%. Copper really moved. It went from 24¢ a pound in May '55 to over 43¢ a pound in December '55. Common stocks moved also. They more than doubled from trough to crest of the present cycle."

"Do stock prices have this 9.2-year cycle too?" asked Robert.

"My yes!" I answered. "See here. [See above.] Here is a chart of stock prices 1855 to date. The figures have been corrected for long term trend and smoothed, just as in the other charts. The 9.2-year cycle is as plain as the nose on your face."

"And we are just at the top now?"

Just Now Past the Peak of the Ideal Cycle

"We are just past the *ideal* time of high," I said. "The *actual* high is generally a bit early or a bit late. To tell which it's going to be for any particular time you need to know about other cycles and you need to be a stock market forecaster."

"I notice the low due in 1951 came early. Could that have been foretold?" asked Robert.

"Yes," I answered. "A combination of other stock market cycles which I discovered in 1944 gave accurate foreknowledge of the early turn."

"I notice that none of these charts is up to date," said Robert. "Why is that?"

"The smoothing process loses some values at each end. You can never have smoothed figures up to date, except by guess work. A forecaster always uses latest possible figures, unsmoothed, for forecasting work. However I am not a forecaster."

"But speaking broadly, this would be a good time to sell, with the idea of buying in again for or five years later?"

"In the past such a course would almost always have been profitable."

"Do you consider this 9.2-year cycle to be dependable?" asked Robert.

9.2-Year Cycle Dependable

"That depends upon what you mean by the word," I answered. "I am convinced that there is a 9.2-year tendency in the price of common stocks. I am convinced that this tendency is not the result of chance. I firmly believe that this tendency will continue. However, I cannot be sure that it will *always* dominate. Random forces or other cycles might temporarily upset it, or distort it. Back in 1868 is a case in point. Prices "should" have gone down from 1864 to 1868, but they didn't."

"Why didn't they?" asked Robert.

Railroad Stock Price Cycles Different

"I don't know," I answered, "but I think its because the figures back there are for railroad stock prices, and railroad stock prices have a 19.4-year cycle that is largely absent from industrial stock prices. This 19.4-year cycle was cresting when the 9.2-year cycle was due to trough."

"Why do railroad stock prices have cycles different from industrial stock prices?"

"I don't have the faintest idea," I answered.

"Where else do you find this 9 2/10- or 9 3/10-year cycle?" asked Robert.

The 9.2-Year Cycle Present in Many Things

"Goodness!" I said, that's a big order. We find it lots and lots of places. What do you say we pass that up until next week?"

"All right," said Robert. "I'm getting a bit tired myself. You have given me a lot to think about. And tomorrow I am going to see my broker!"

"Good," I said.

Letters

THE 36—37½ -HOUR CYCLE IN EMOTION

IN our January report I printed for you a letter to the chairman of our Committee, Mr. George Baekeland, from a former Vice Consul to Siam. In this letter the Vice Consul, Mr. Dwight H. Bulkley, reported an amazing verification of some cycle knowledge of a Buddhist sage.

Briefly, the sage had told Mr. Bulkley that if a person were under great stress at some particular moment there would be repercussion of that stress at from 36 to 37½ hours later. The sage also said that 72 to 75 hours later there would be further repercussion and so on, but getting weaker each 36-37½ hour cycle.

In his letter to Mr. Baekeland, Mr. Bulkley told of some dramatic events tending to confirm the sage's observation. Mr. Bulkley also said that he had accumulated more than 1000 additional case histories, most of which fitted into the same picture.

This letter of Mr. Bulkley evoked a letter and a chart from Mr. Charles H. Pinkham of Lynn, Massachusetts. Mr. Pinkham's letter in turn resulted in another letter from Mr. Bulkley.

In view of the interest that Mr. Bulkley's original letter has aroused I am printing, with permission, Mr. Pinkham's letter to Mr. Bulkley and Mr. Bulkley's reply to Mr. Pinkham.

MR. PINKHAM'S LETTER

Dear Mr. Bulkley:

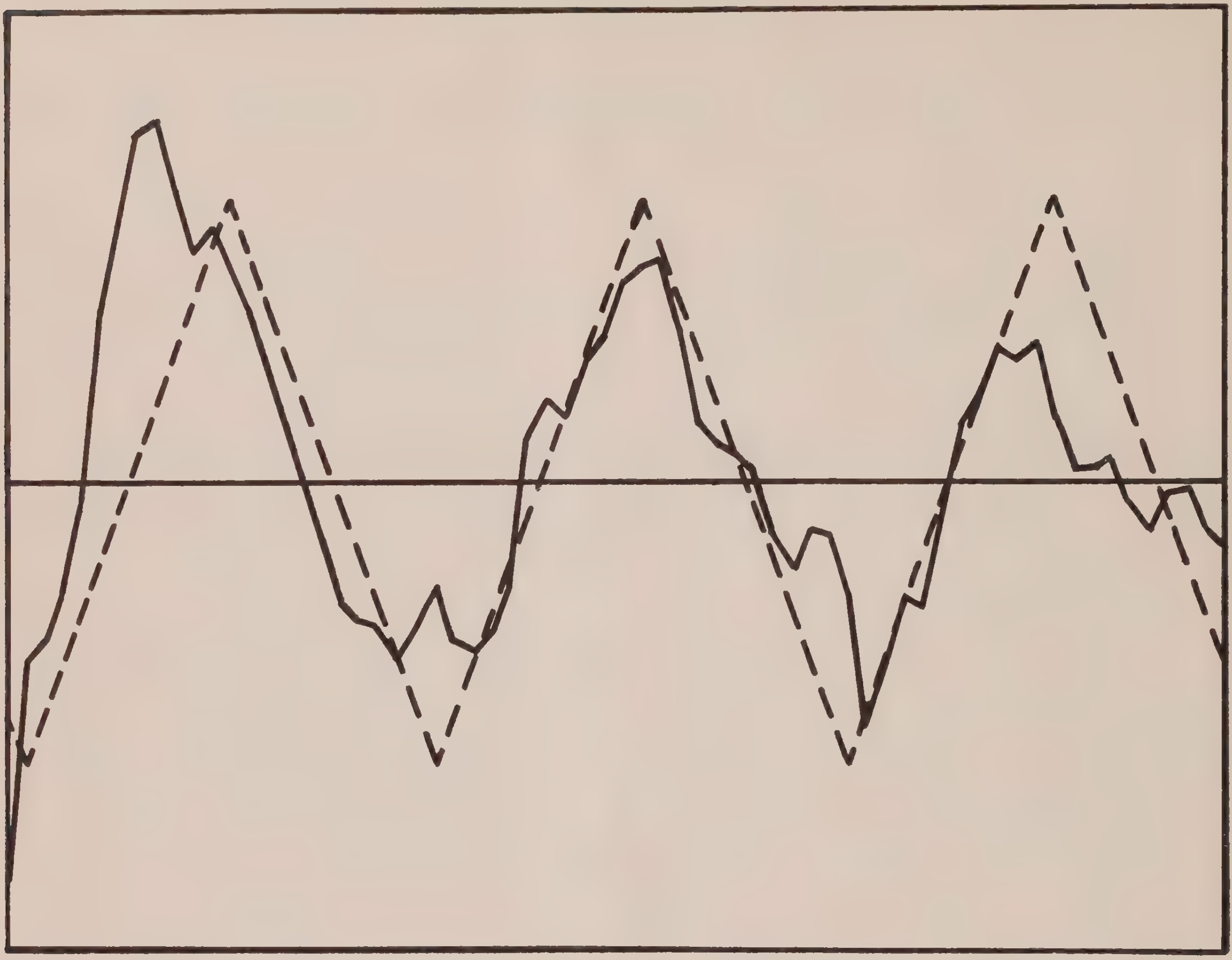
Regarding your letter in the January 1956 issue of *Cycles,* I, for one, *don't* think you are nuts!

I'm enclosing a confidential 8-page analysis of the major cycle in a certain business...written in terms that the layman can understand. You can realize how well I understand your numerous frustrations when I tell you that 10 years ago I first pointed out this cycle to the management of that company and have called it to their attention many times since then. They just can't see it. And yet it jumps right off the page at you! Here it is in the sales curve. I am showing it as a deviation from the graphic trend and am not identifying time periods...so that I won't reveal anything of a confidential nature. The chart covers a period of the best part of a hundred years.

I have a very warm brotherly feeling for all frustrated cycle-analysts!

The tremendous amount of work which you have done to verify your theories during the past three years is simply amazing! And I can see from your letter in *Cycles* that your training has fitted you admirably for the job. Because of this, I hesitate to be so bold as to offer any suggestions, but fools rush in...

Do you think that what you have dis-



covered is what we ordinarily refer to as "cycles"? Or do you think that you have found an emotional *lag* of 36 hours (and its multiples) between the motivating cause and the physical and mental reaction?

Lag is a favorite subject of mine. I'm writing an article on it now which I'm going to submit to Ned Dewey, and...if he can forget his pet theories long enough to consider mine...he may publish it. Briefly, the reaction of the consumer to advertising, at the retail level, is only a few days. However, in a company whose advertising effectiveness is dominated by a 22-year cycle, there is a 5-year lag between advertising effectiveness and sales.

This is just as fantastic as what you suggest, but in my opinion my evidence is irrefutable. And...from what you have told us...so is your evidence.

The reason that I can't think of your discovery as a cycle is that your motivating force can come anytime. It doesn't necessarily come at the peak of an existing 36-hour rhythm. Your motivating force starts a new series of rhythms. Just like when you throw a stone into a pond the action causes ripples to move outward. If you threw another stone a few seconds later and it landed in the same place, it would start other ripples moving outward. Those new ripples would ignore the *timing* of the existing ones.

Perhaps you have stumbled upon something of tremendous importance in more ways than one. I have always felt that the most popular rhythms, such as the 6-year and 22-year, are caused by cosmic forces. And I have stupidly jumped to the conclusion that *all* rhythms *must* be of cosmic origin and thus beyond our control.

You have opened the door to a new line of thought. You have demonstrated that in the life of *one individual* a tragedy or violent emotional experience can *motivate* a delayed action...a reaction with a 36-hour lag. From what you say, I gather that the reaction may be repetitive and occur again in another 36 hours. Or are the repetitive reactions more like the ripples on the pond? Do they get longer..in multiples of 36...just as the ripples get larger and larger?

Group Effects

You have made me see what can happen to one individual. It follows that a disaster which affects a whole community...a flood, earthquake, holocaust, explosion...might well set in motion ripples which would affect the physical, mental, and emotional reactions of many people living in that area. The same could be true of a whole nation. And it might not be too wild a notion to imagine that a more complete understanding of your theories might someday permit us to predict the timing of retaliation or reprisal in diplomacy or in war.

A New Line of Thought

You have opened the door to a complete new line of thought. I admire your courage and conviction in staying with the problem until you were able to develop convincing evidence. There may be only a few of us who are not ashamed to admit openly that we will go along with your ideas and help you prove or disprove them. But don't let that discourage you. Remember that many of the great scientists in our history books had little if any support from members of their own generation.

Sincerely,
Charles Pinkham

Lynn, Massachusetts

MR. BULKLEY'S REPLY

Dear Mr. Pinkham:

Thank you for your most generous encouragement of my research on 36-hour rhythms, cycles or lags in human psychosomatic phenomena. Although it may seem that I have done much work on it, I have actually barely scratched the surface.

I would say that I had gone just deep enough to make absolutely certain I wasn't on a wild goose chase, chasing an artifact of my own creation. A body of data now requires clarifying and definition.

Anyone Can Work At It

Anyone can work on it, without cost, by merely observing their own mishaps and noting the relevancy of other events 36 hours and multiples before. Two things can then be furthered: 1) general public knowledge, and 2) progress in self-insight. This latter requires a peculiar species of courage inasmuch as such time calculations can be quite disturbing to one's beliefs about oneself.

Is this a lag or cycle? My first published note on this was titled: "Case history evidence of a time-lag of 37½ hours between an incident of stress (restimulating associative memories of early trauma) and psychosomatic responses." First cases were in Southern California and Phoenix, Arizona.

The Foucault Pendulum

I mention the locations for an important reason: Last month I found out that the period, or full cycle, for the Foucault Pendulum was 24 hours at either Pole, increased to 32 hours at Paris (lat. c.48') to 36 hours 45 min. at New York (lat. c.42') and to infinity at the equator.

Here again, there *may* be a correlation between the latitude and the specific time interval or lag, or cycle; the closer to the equator, the longer the cycle. Currently in Cincinnati they seem pretty close to 36 hours plus a fraction. But then the time for any place may again vary rhythmically (as note how the tides do).

Again, lag or cycle? At first I had

just a series of pairs - like stimulus and response. Then I traced a few backwards double the span. Then I found some in which I could find and trace 4, 5, or 6 events in causal series. And finally I began to wonder whether there *was* any real beginning for any series. A beginning in which something *just happens,* like an "accidental" stimulus. It looked again and again as if these apparently "accidental" stimuli, beginning-points - were themselves created, engineered, brought-about purposefully.

A Theory

Thus, finally, it seems to be something like this: Given the normal situation for everyone, in which there are both positive and negative associations for a given object-event-or-goal. Conflict. Let's say there is strong conflict between (A) and (B). Because of certain experiences, we're betwixt and between these two.

Now let's say that it's impossible for our mental-muscular tensions to be exactly balanced towards the two conflicting object-goals. Given a slight imbalance, there is effort to re-balance. We overshoot the mark. Again, effort to re-balance. Again overshoot. A bigger surge, and another even bigger. Until on the 4th or 5th (homeostatic) cycle we do something pretty bad and it scares us into settling back onto an even-keel conflict.

But - this happens: two separate series going simultaneously, each apparently unrelated to the other series, say about 5 hours later, each series with its own 36-hour timing.

Now, suppose that because of the mutual motions of three "charged" bodies such as sun, earth and moon - spinning in themselves, and about each other - there is generated a pulse of energy filed in and about and with respect to all three bodies and other planets as well.

At any point on the earth's surface, it would be reasonable to suspect that there were a rhythmic pulse of vertical "field", or "charge" and that all of our metabolic activities varied rhythmically along with the variations of ionic mobilities, etc. We can also assume that there is a magnetic vector which also varies rhythmically, inasmuch as "electrical" and "magnetic" forces do not exist independent of the other. They are as two aspects of a single event.

I would presume, therefore, that there is first of all a natural physical 36-hour (with variation) rhythm arising out of these relative motions. I would then suspect that event-experiences can be "associated" with a particular "field intensity", or something - so that when the same "field intensity" re-occurs, we are, in a sense, *reminded* subconsciously, of this event, and then *do something* to rectify, or forestall, or modify it. Then 36 hours later, comes the same or similar "field intensity" again, and again we are "*reminded*" of the pain or threat of pain, and again *do* something calculated (by other experience) to rectify it.

The above is admittedly a very very tentative theory to explain what I have observed.

We Can Control the Situation

But there is this important point: while I also conclude that all rhythms must be of cosmic origin - I don't agree with your "and thus beyond our control". Or, better, I would agree yes, the rhythms (of energy) are beyond our control - *but* what we do about them are not. In other words, I am satisfied that when one "deconditions" the original traumatic associations - one *no longer* acts and reacts in accordance with these reminders. One *can* become free of the rhythms. That is to say, the *rhythms* don't *do* anything. They just are. What *we do* about ourselves with respect to the rhythms as reminder - is under our control, absolutely, Of this I am certain.

The entire evidence of my studies on the 36-37-hour rhythms of human activities good and bad - demonstrates to me that we human beings are self-determined masters of our own destinies. The trick is to root out those painfully-conditioned motivations. The trick is to decondition, by any of hundreds of techniques and methods known and taught down thru the ages.

Another Fundamental

Another fundamental basic of this study is this: No one can do anything *to* you against your will. Take any case you find of two people clashing - one person hurts the other, robs the other, propitiates another. Check *both* of them back 37 hours and 3 days, etc. - and you'll find how they both came together by mutual consent for the given result. That each wanted what happened to happen. That they *both* engineered the event. The fact is *confluence*, agreement.

ESP - Extrasensory Perception

And here's the bombshell: I know of no mass of data which proves ESP so thoroughly. Rather a roundabout proof - but devastating, to demonstrate that human beings are *vastly aware* of each others deepest needs and motivations.

Check this case (lifted from my unpublished monograph):

One of the most dramatic stories is of a mother who, on a late Friday evening, felt a gradual rise of acute anxiety and for two hours before midnight, lay on her bed in mental agony, distracted by the lack of reason for her turbulance.

Again, on Sunday noon, 36 hours later, came this feeling with even greater intensity. She fell on her bed, weeping in anguish. Again it was inexplicable.

That afternoon, five hours later, she received a telephone call from 50 miles away:

"Your daughter attempted to commit suicide this noon."

To the extent that she was "tuned" to her daughter, she had been aware of *both* events - the preliminary ("casual") crisis, and the suicide attempt 36 hours later.

To close up this letter before it gets completely out of hand - I think I should append a half dozen or so typical examples of this inertial or cyclical phenomenon - in brief: (with no interpretations).

Case: Conjunctivitis: rather sudden inflammation of right eye. 37½ hours prior: witness auto accident, saw dead body partly covered with blanket, arms exposed, flies buzzing. Feeling of revulsion, effort to not-see it.

Case: Asthmatic attack: Male, age 21 severe use of drugs, etc. 37½ hours prior: Received letter from finace - breaking relationship, wrote reply. Sense of loss, confluence break.

Case: "Accident" overheated large titanium pot to red-hot, great danger. 36 hours prior: Rejected by new and exciting female acquaintance, who called up and broke date.

Case: Hemorrhage from throat. Female, 18. 36½ hours prior: In great conflict with mother who rejected her, telling her she was stupid and no good.

Case: Diarrhea. spontaneous. something for breakfast? Male. 37 hours prior: in deep philosophical argument with important person who rejected and ridiculed prime thesis.

Case: Sudden fever. Infant 2 yrs. old. High temperature and vomiting. 36 hours prior: "Accidentally" abandoned at neighbors home while parents drove off, but quickly returned. Hysterical crying.

and so forth and so one.. ad infinitum.

Comprehensive Study Needed

"You of course realize that these examples do not *prove* anything. No matter what period of time one might select backwards from a mishap it would doubtless be possible to find events that might be construed as important and possibly related, causally. But what is needed for proof is some sort of comprehensive study to show that events spaced at 36-37 hours are *significantly* more frequent than any other interval and.have more *meaning* in terms of subconscious associations and causes.

For example, take the case above of the throat hemorrhage: Could we find *meaning* in the bleeding, related directly to emotional relationship with mother? Yes. We found that at the age of about 2½ years, she almost dies of a strep throat accompanied by severe throat hemorrhage; that the doctors had tried everything without success; that whereas her mother had had little affection for her infant daughter to that point - that night her mother sat by her bedside all night praying for her to live. Subject said that this was the first time that she had felt that her mother really loved her. So, apparently, years later, subject used this state of hemorrhage because it was deeply associated with mother's love, as if to change hate to love, though delayed 37 hours.

As I said in my first letter to Mr. Baekeland, "Probably of greatest importance is a pilot study project, set up where there is a massive flow of cases of all types - a private or industrial hospital, police court, emergency clinic, etc., where subjects can be queried, and histories documented for analysis. Observers, tape recordings, etc.

With regards, and best wishes -

Dwight H. Bulkley

3918 Beech Street
Cincinnati 27, Ohio

THE MODIFIED GEISINGER INDICATOR

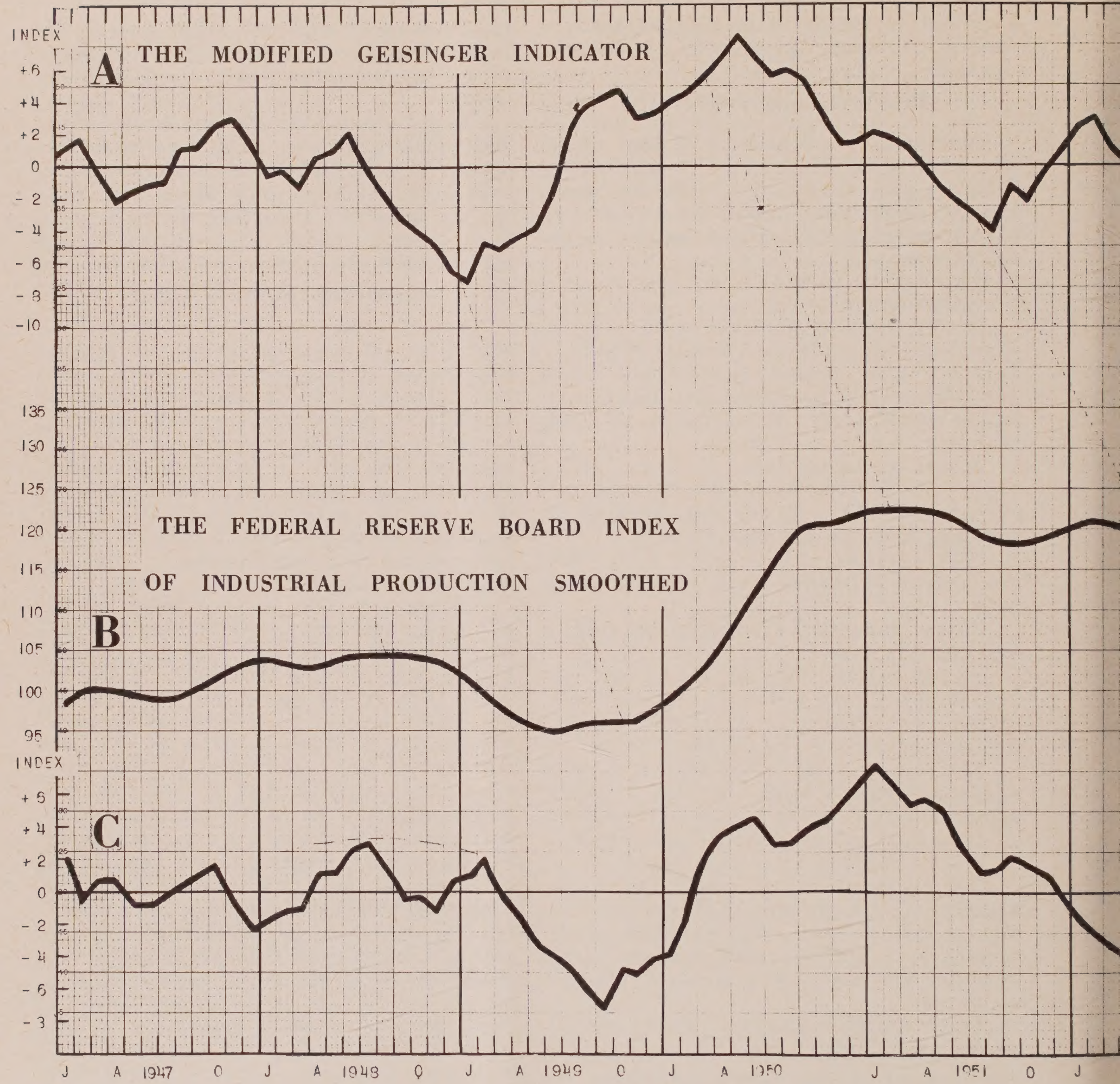
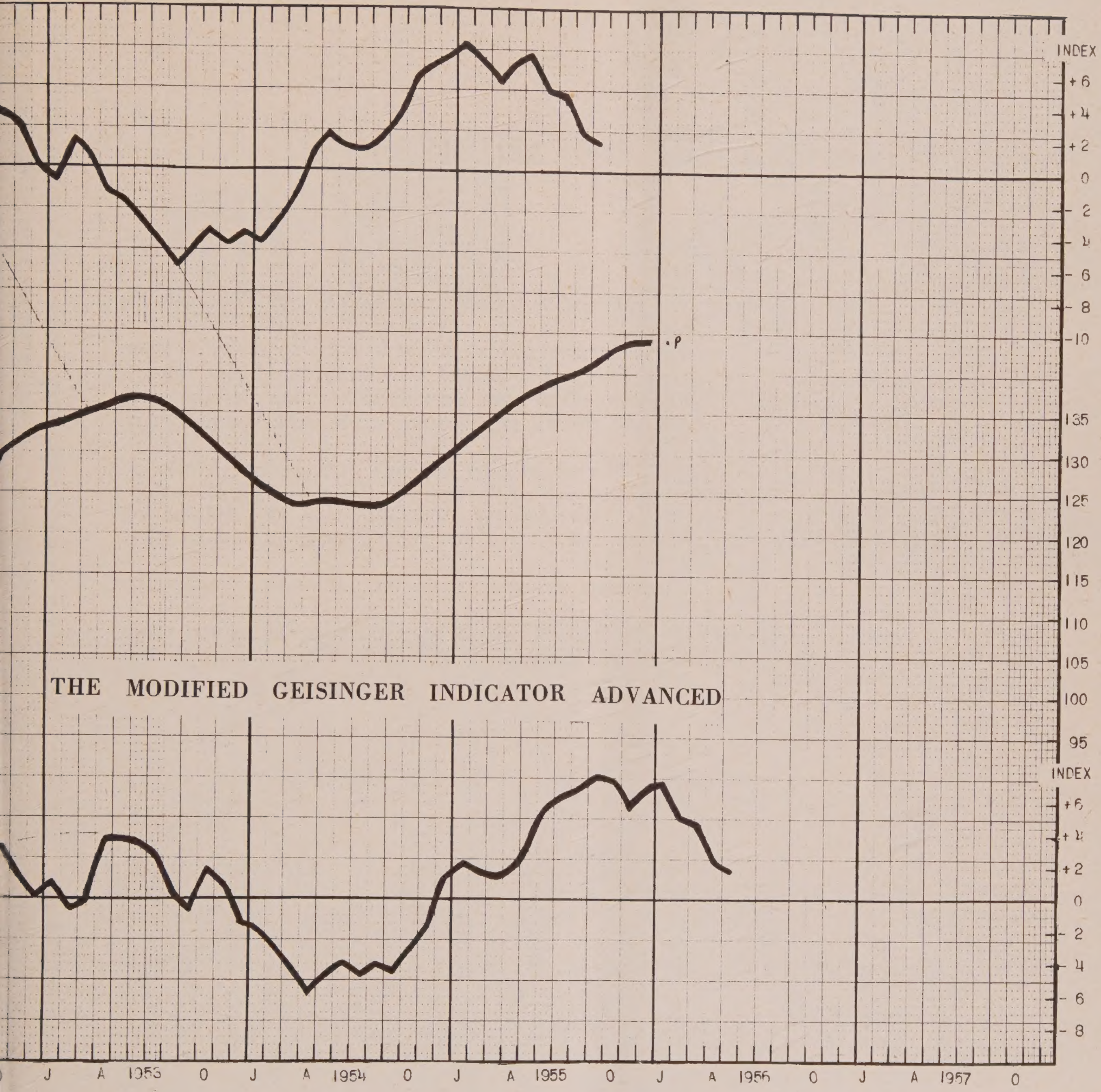


Fig. 1 Curve A. The Modified Geisinger Industrial Production Indicator Curve. This curve is derived from certain figures which are published monthly in the *Survey of Current Business*. It tends to turn about 8 months before the Federal Reserve Board Index of Industrial Production.

Curve B. The Federal Reserve Board Index of Industrial Production adjusted for seasonal variation and smoothed by a 3-month moving average. The value for the latest available month is shown by a dot.

Curve C. This curve is the Modified Geisinger Industrial Production Indicator Curve advanced by 8 months. This process projects part of the curve into the future. If the relationships of the past continue, the projection gives some hint of what may happen to the Federal Reserve Board Index of Industrial Production (Curve B).

OF INDUSTRIAL PRODUCTION



THE MODIFIED GEISINGER INDICATOR ADVANCED

THE FORECAST

The Modified Geisinger Indicator dropped from + 2.3 for August to + 1.7 for September (May 1956 when projected).

Enough figures are in so that it is possible to say that the value of the indicator will rise slightly for October (June 1956 when projected). It will, however, not be over + 3.3. I attach no importance to this slight rise.

The Federal Reserve Board Index of Industrial Production (seasonally adjusted) was 144 in January, the same as in December. Are we rounding over?

I continue to feel that the Federal Reserve Board Index will probably decline during 1956. My guess of levels is, as stated elsewhere in this issue, an average of 142 for the first half, 135 for the second half. Let's see how this comes out!

E. R. D.

Mr. H. A. Musham
741 No. Rush St.
Chicago, Ill.

CHANGE OF ADDRESS

Dear Member:

You can save us a *lot* of money and improve our service to you if you will notify us in advance of any change of address.

The Post Office Department will not forward *Cycles* to you when you move, unless you leave postage with them. However, they are supposed to notify us if any report is undeliverable, *but mostly they do not.* When they do notify us, the information comes to us two or three months after the event, or it comes to us with the notation "Left. Address Unknown."

It would amuse you to read the letters we receive in this connection. A man in Florida writes. "I have not received any copies of *Cycles* for the past three months. What is the matter with you people?" An investigation discloses that the address in our files is Morristown, New Jersey, and that he did not notify us in regard to this new permanent or temporary change of address.

We are confronted with about 1000 address changes a year. We, of course, take this in our stride because it is a part of our job. People move on either a temporary or permanent basis and we naturally have to change the address to suit. It is not this 1000 that I am talking about. It is the 200 or the 300 changes that we are *not* notified about which causes all the confusion and expense for us and misunderstanding and loss of value to you.

WON'T YOU PLEASE TRY TO REMEDY THIS SITUATION?

If you are moving to either a temporary or permanent address, just drop us a card which will read, "I am going to Florida for ...... months. Please send my reports to me there for this period" or "Please hold the reports for four months and send them to me on my return home......." or "My new address is........."

It would amaze you to know how many people fail to leave their forwarding address with the post office, or with anyone else. I would say that we lose about 300 members a year and these members lose the unexpired portion of their membership because of this appalling American habit.

Please send us your new address ahead of time. Do this for your own benefit, and for ours.

Very cordially yours,

Edward R. Dewey

Director